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ABSTRACT

Statistics from a national survey of public and private elementary and secondary school teachers are presented. A descriptive analysis identifies similarities and differences between the two groups of teachers. Two general questions provided the focus of the survey: (1) To what extent do public and private school teachers differ with regard to demographic characteristics, educational background, and teaching experience? and (2) Do public and private school teachers' differences regarding demographic characteristics, educational background, and teaching experience persist when other variables, such as teaching level, school size, and geographic region, are considered? (JD)

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# NATIONAL CENTER FOR EDUCATION STATISTICS

## Survey Report

October 1988

# Background and Experience Characteristics of Public and Private School Teachers: 1984-85 and 1985-86, respectively

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Elementary and secondary school teachers are the Nation's largest group of professionals with 2 million in public schools and more than 400,000 in private schools across the country.[1] Data on many key variables are lacking, however, especially data that permit direct comparisons between public and private school teachers. The public and private school surveys of the National Center for Education Statistics are significant in filling these data needs.[2]

The following are samples of the findings discussed in this report:

- Eight percent of private school teachers and 14 percent of public school teachers are members of minority groups;
- Women, at 76 percent for private school teachers and 68 percent for public school teachers, provide the great majority of both teaching groups;
- Public school teachers are more likely than private school teachers to have earned an advanced academic (master's or doctorate) degree (48 percent to 31 percent);
- As undergraduates, private school teachers are more likely than public school teachers to have majored in fields other than education (46 to 28 percent); and
- With about 14 years on average, public school teachers have almost 4 more years of full-time teaching experience than private school teachers, who average around 10 years.

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NOTE: This survey report is based on data from the 1984-85 Public School Survey and the 1985-86 Survey of Private Schools that were conducted for the National Center for Education Statistics, U.S. Department of Education. The analyses for the report were performed by Decision Resources Corporation (DRC) for the National Center for Education Statistics. The report was written by E. William Strang of DRC.

[1]For this survey report, "teachers" are elementary or secondary school teachers who teach in grades K-12; elementary grades are defined as K-8, and secondary grades are 9-12. More information about samples and definitions of key variables is provided in the technical notes at the end of the report.

[2]These data deficiencies are being addressed further. For example, the Schools and Staffing Survey (SASS) is a new data collection activity recently initiated by the National Center for Education Statistics. Designed under a contract with The RAND Corporation and conducted through an interagency agreement with the Bureau of the Census, SASS was implemented in January 1988 and will provide more detailed data on public and private school teacher supply, demand, quality, and compensation than have previously been available.

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This survey report addresses some of the questions raised by advocates and critics, policymakers, researchers, parents and others about public and private school teachers. Two general questions provide the focus:

1. To what extent do public and private school teachers differ with regard to demographic characteristics, educational background, and teaching experience?

2. Do public and private school teachers' differences regarding demographic characteristics, educational background, and teaching experience persist when other variables, such as teaching level, school size, and geographic region, are considered?

The larger purpose of the report is to identify similarities and differences between the two groups of teachers. The emphasis, therefore, is on descriptive analyses.[3]

## COMPARING PUBLIC AND PRIVATE SCHOOL TEACHERS

This section compares public and private school teachers on demographic characteristics, educational background, and experience in education. Geographic region, school size, and teaching level are used throughout this section to provide additional information to further the understanding of differences between the two groups of teachers.

### DEMOGRAPHIC CHARACTERISTICS

The National Center for Education Statistics surveys permit direct comparisons of public and private school teachers regarding age, gender, and race/ethnicity. In general, significant differences between public and private teachers exist even when region, school size, or teaching level is considered.

#### Age

Private school teachers are somewhat younger than public school teachers. The average age of private school teachers is about 38 years old compared to a mean age of about 40 for public

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[3]The statistical techniques and tests of significance used are described in the technical notes.

school teachers (table 1).[4] For the most part, region and teaching level are not closely related to age of teachers, that is, the public/private differences in average age vary only slightly from region to region from a low of about 1 year in the South to about 3 years in the West. As for school size, public school teachers in small and mid-sized schools are somewhat older than their private school counterparts while they are the same average age (40) in large schools.

TABLE 1: Average Age of Public and Private School Teachers, by Region, School Size, and Teaching Level

| | Public Teachers* (n=8,392) | Private Teachers (n=5,249) |
|---|---|---|
| Region | | |
| Northeast | 41** | 39 |
| Midwest | 40 | 38 |
| South | 39 | 38 |
| West | 41 | 38 |
| Teaching Level | | |
| Elementary | 40 | 38 |
| Secondary | 40 | 39 |
| School Size | | |
| Small | 40 | 37 |
| Mid-sized | 41 | 39 |
| Large | 40 | 40 |
| All Teachers | 40 | 38 |

* The sample size for public teachers is 7,500 for analyses involving school size. The estimates involve adjusted weights.

** Significance tests for all two-way comparisons are provided in tables A-D in the appendix.

SOURCE: Public School Survey 1984-85 and Survey of Private Schools 1985-86.

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[4]All specific comparisons stated in this survey report are statistically significant at least at the .01 level; the sample sizes are quite large, however, so statistical significance at that level can be found with percentage differences as small as 2 percent. Statistical significance is discussed in the technical notes. In addition, data about sample sizes, national population estimates, standard errors, and significance tests of public/private differences, are presented in detail in tables A-D in the appendix.

Age-category comparisons indicate private school teachers are overrepresented in the youngest age category (for example, 24 percent of private school teachers are under 30 years old while 14 percent of public school teachers are under 30), and they are underrepresented in the oldest category (for example, 15 percent of private school teachers are 50 or older while 19 percent of public school teachers are over 50) (table 2).

TABLE 2: Percentages of Public and Private School Teachers, by Age Category

| Age Category | Public Teachers* (n=8,392) | Private Teachers (n=5,249) |
|---|---|---|
| Younger than 30 | 14 ** | 24 |
| 30 - 34 Years | 17 | 18 |
| 35 - 39 Years | 23 | 20 |
| 40 - 44 Years | 16 | 14 |
| 45 - 49 Years | 12 | 9 |
| 50 Years or Older | 19*** | 15 |

* The sample size for public teachers is 7,500 for analyses involving school size. The estimates involve adjusted weights.

** Significance tests for all two-way comparisons are provided in tables A-D in the appendix.

*** Columns may not add to 100 percent due to rounding.

SOURCE: Public School Survey 1984-85 and Survey of Private Schools 1985-86.

**Gender**

Whether they teach in public schools or private ones, the Nation's nearly 2.5 million elementary and secondary school teachers are overwhelmingly female. Women make up about 68 percent of the public teaching force and almost 76 percent of the Nation's private school force (table 3).

Women predominate in all regions among public and private school teachers. Private school teachers are more likely than their public school counterparts to be women in all regions. The difference is smallest in the South, at 3 percent, and largest in the Northeast and Midwest, at 13 percent.

TABLE 3: Percentages of Female Public and Private School Teachers, by Region, School Size, and Teaching Level

| | Public Teachers* (n=8,392) | Private Teachers (n=5,249) |
|---|---|---|
| All Teachers | 68 ** | 76 |
| Region | | |
| Northeast | 61 | 74 |
| Midwest | 64 | 77 |
| South | 76 | 79 |
| West | 65 | 71 |
| School Size | | |
| Less than 400 | 77 | 80 |
| 400 - 699 | 76 | 75 |
| 700 or Larger | 61 | 63 |
| Teaching Level | | |
| Elementary | 79 | 89 |
| Secondary | 48 | 51 |

* The sample size for public teachers is 7,500 for analyses involving school size. The estimates involve adjusted weights.

** Significance tests for all two-way comparisons are provided in tables A-D in the appendix.

SOURCE: Public School Survey 1984-85 and Survey of Private Schools 1985-86.

School size appears to be consistently related to the percentage of women teachers. The larger the school (with large schools tending to be secondary schools), the smaller the percentage of women teachers for both public and private schools. In terms of teaching level, women account for the great majority of elementary level teachers, with 89 percent in private and 79 percent in public schools, but they comprise only about one-half of the secondary level teachers in each group.

**Age and Gender**

The percentage differences between public and private school teachers based on gender are related to the age of the teachers (table 4). The percentage of women of the youngest group of teachers is virtually identical for public and private school teachers. Further, for public and private school teachers, among

those aged 30 to 34, a substantially smaller share are women. Over age 35, the percentage of women teaching in public schools remains generally in the mid- to upper-60 percent range, but the percentage of women over 35 teaching at private schools increases rapidly to the low- to mid-80 percent range.

TABLE 4: Percentages of Female Public and Private School Teachers, by Age Category

| | Younger Than 30 | 30-34 | 35-39 | 40-44 | 45-49 | Older Than 50 |
|---|---|---|---|---|---|---|
| Private Teachers (n=5,249) | 77 * | 66 | 71 | 80 | 85 | 82 |
| Public Teachers** (n=8,392) | 76 | 69 | 65 | 65 | 69 | 66 |

* Significance tests for all two-way comparisons are provided in tables A-D in the appendix.

** The sample size for public teachers is 7,500 for analyses involving school size. The estimates involve adjusted weights.

SOURCE: Public School Survey 1984-85 and Survey of Private Schools 1985-86.

**Race/Ethnicity**

Public school teachers are more likely than private school teachers to be from a racial or ethnic minority group (table 5). The 5 percent overall difference among the minority percentages, however, conceals substantial regional variations.

By region, the proportion of minority public school teachers is higher than the proportion of minority teachers at private schools in the Midwest and the South (5 and 10 percent higher, respectively) and about the same in the Northeast and West. Among the smallest schools, the minority percentage is similar for public and private school teachers, but the minority percentage is 9 percentage points higher for public school teachers in the largest schools. Teaching level is related to the percentage of minority public and private school teachers in that larger percentages of minority teachers are present for both groups at the elementary school level.

TABLE 5: Percentages of Minority Public and Private School Teachers, by Region, School Size, and Teaching Level

| | Public Teachers* (n=8,392) | Private Teachers (n=5,249) |
|---|---|---|
| All Teachers | 13 ** | 8 |
| Region | | |
| Northeast | 7 | 6 |
| Midwest | 9 | 4 |
| South | 21 | 11 |
| West | 12 | 12 |
| School Size | | |
| Less than 400 | 9 | 9 |
| 400 - 699 | 14 | 6 |
| 700 or Larger | 14 | 5 |
| Teaching Level | | |
| Elementary | 15 | 9 |
| Secondary | 10 | 6 |

* The sample size for public teachers is 7,500 for analyses involving school size. The estimates involve adjusted weights.

** Significance tests for all two-way comparisons are provided in tables A-D in the appendix.

SOURCE: Public School Survey 1984-85 and Survey of Private Schools 1985-86.

**Race/Ethnicity and Age**

The percentages of minority teachers do not vary substantially among teachers of different age groups at public and private schools (table 6). The percentage of minorities among the six age groups for public school teachers has a range of only 3 percentage points (from 12 to 15 percent), and the percentage range for private school teachers is but 4 percentage points (from 6 to 10 percent). The differences between the percentages based on race/ethnicity of public and private school teachers range inconsistently from 2 to 8 percent, although there may be a slight tendency for the minority percentage differences to be greater among older teachers.

TABLE 6: Percentages of Minority Public and Private School Teachers, by Age Category

| | Younger Than 30 | 30-34 | 35-39 | 40-44 | 45-49 | Older Than 50 |
|---|---|---|---|---|---|---|
| Private Teachers (n=5,249) | 8 * | 9 | 10 | 7 | 8 | 6 |
| Public Teachers** (n=8,392) | 12 | 15 | 12 | 14 | 14 | 14 |

* Significance tests for all two-way comparisons are provided in tables A-D in the appendix.

** The sample size for public teachers is 7,500 for analyses involving school size. The estimates involve adjusted weights.

SOURCE: Public School Survey 1984-85 and Survey of Private Schools 1985-86.

## EDUCATIONAL BACKGROUND

This section presents differences and similarities between public and private school teachers' educational background, specifically their highest academic degrees and their undergraduate majors.

### Highest Academic Degree

About one of every two public school teachers has earned a master's degree or higher compared to about one of every three private school teachers (48 percent and 31 percent, respectively, table 7).

Region, school size, and teaching level are also related to highest academic degree status. The greatest regional difference between the percentages of public and private teachers with master's degrees is in the Midwest where the difference is 28 percent. Other regional differences range from 8 percent in the West to 20 percent in the Northeast, with the difference in the South being 14 percent.

School size is related to the percentage of public and private school teachers with master's or higher degrees. The larger the school, the greater the percentage of teachers with at

TABLE 7: Percentages of Public and Private School Teachers with Master's Degrees or Higher, by Region, School Size, and Teaching Level

| | Public Teachers* (n=8,392) | Private Teachers (n=5,249) |
|---|---|---|
| All Teachers | 48 ** | 31 |
| Region | | |
| Northeast | 58 | 38 |
| Midwest | 52 | 24 |
| South | 45 | 31 |
| West | 37 | 29 |
| School Size | | |
| Less than 400 | 39 | 25 |
| 400 - 699 | 46 | 35 |
| 700 or Larger | 50 | 47 |
| Teaching Level | | |
| Elementary | 45 | 22 |
| Secondary | 53 | 48 |

* The sample size for public teachers is 7,500 for analyses involving school size. The estimates involve adjusted weights.

** Significance tests for all two-way comparisons are provided in tables A-D in the appendix.

SOURCE: Public School Survey 1984-85 and Survey of Private Schools 1985-86.

least a master's degree.[5] In fact, the public/private difference is only 3 percent at the largest schools. Teaching level is also consistently related to degree level, with both public and private secondary level teachers much more likely than elementary teachers to have at least a master's degree. For public school teachers, however, the percentage holding master's or higher degrees differs only by 8 percent between public elementary and secondary school teachers, while private elementary school teachers differ by 26 percent from private secondary school teachers.

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[5]The 1985-86 Survey of Private Schools deliberately excluded schools located in private homes that are also used as residences, so the teachers from the smallest and least "formal" of the private schools are not included in these data.

**Academic Major**

The majority of public and private school teachers majored in education as undergraduates (table 8). This is especially true for public school teachers. While about 65 percent of private school teachers report their undergraduate major as education, either by itself or in combination with a major in another field (that is, as part of a dual major), nearly 90 percent of public school teachers report education, or education combined with another major, as their major. From the perspective of majoring in a noneducation field, either by itself or as part of a dual major involving education, 29 percent of public and 46 percent of private school teachers had noneducation majors.

TABLE 8: Percentages of Public and Private School Teachers with Undergaduate Education, Noneducation, or Dual Majors, by Region, School Size, and Teaching Level

| | Public Teachers* (n=8,392) | | | Private Teachers (n=5,249) | | |
|---|---|---|---|---|---|---|
| | Education | Dual | Non-education | Education | Dual | Non-education |
| All Teachers | 72 ** | 18 | 11 *** | 53 | 12 | 34 |
| Region | | | | | | |
| Northeast | 66 | 21 | 13 | 49 | 12 | 40 |
| Midwest | 77 | 16 | 8 | 64 | 12 | 24 |
| South | 76 | 14 | 10 | 55 | 13 | 33 |
| West | 63 | 23 | 14 | 45 | 12 | 43 |
| School Size | | | | | | |
| Less than 400 | 77 | 15 | 8 | 57 | 13 | 30 |
| 400 - 699 | 75 | 15 | 9 | 53 | 13 | 34 |
| 700 or Larger | 65 | 20 | 14 | 43 | 10 | 47 |
| Teaching Level | | | | | | |
| Elementary | 75 | 16 | 8 | 63 | 13 | 24 |
| Secondary | 65 | 20 | 15 | 37 | 10 | 53 |

* The sample size for public teachers is 7,500 for analyses involving school size.

** Significance tests for all two-way comparisons are provided in tables A-D in the appendix.

*** The row percentages for each group may not add to 100 percent due to rounding.

SOURCE: Public School Survey 1984-85 and Survey of Private Schools 1985-86.

Public school teachers are consistently more likely to have an education major in each of the regions. The public/private differences in having education as an undergraduate major range from 17 percent in the Midwest to 29 percent in the West. For public and private school teachers alike, the larger the school, the less likely it is that a teacher reports an education major either by itself or in combination with a major in education. In terms of teaching level, the public/private elementary school teacher difference is 15 percent, while the comparable difference for secondary public and private school teachers is 38 percent.

**Degree and Major**

Teachers' highest academic degrees and undergraduate majors are related, regardless of whether a teacher is in a public or private school (table 9). Among public school teachers with a bachelor's degree, 91 percent have an education major (either alone or as part of a dual major), and, with a master's degree or higher, 87 percent have an education major. The pattern is similar but more striking for private school teachers: about 71 percent with bachelor's degrees report an education major compared to 54 percent of those with master's degrees or higher.

TABLE 9: Relationship between Highest Academic Degree and Undergraduate Major of Public and Private School Teachers

| | Public Teachers | | Private Teachers | |
|---|---|---|---|---|
| Undergraduate Major | Bachelor's | Master's or Higher | Bachelor's | Master's or Higher |
| Education | 76 * | 67 | 59 | 43 |
| Dual (Education and Noneducation) | 15 | 20 | 12 | 11 |
| Noneducation | 9** | 13 | 29 | 46 |
| | (n=4,165) | (n=4,119) | (n=3,410) | (n=1,551) |

* Significance tests for all two-way comparisons are provided in tables A-D in the appendix.

** Columns may not add to 100 percent due to rounding.

SOURCE: Public School Survey 1984-85 and Survey of Private Schools 1985-86.

## EXPERIENCE IN EDUCATION

This section presents differences and similarities between public and private school teachers' experience in the field of education in terms of their years of full-time teaching experience and their recent participation in related training.

### Teaching Experience

Table 10 presents data on the average number of years of full-time teaching experience for public and private school teachers by region, school size, and teaching level. With about 14 years on average, public school teachers have almost four more years of full-time teaching experience than private school teachers, who average around 10 years. The public school teachers' full-time teaching experience edge is present in all

TABLE 10: Average Years of Full-time Teaching Experience for Public and Private School Teachers, by Region, School Size, and Teaching Level

| | Public Teachers* (n=8,392) | Private Teachers (n=5,249) |
|---|---|---|
| All Teachers | 13.9** | 10.4 |
| Region | | |
| Northeast | 15.1 | 11.0 |
| Midwest | 14.5 | 10.7 |
| South | 12.5 | 9.3 |
| West | 14.1 | 9.8 |
| School Size | | |
| Less than 400 | 13.8 | 9.3 |
| 400 - 699 | 14.4 | 11.4 |
| 700 or Larger | 14.0 | 12.9 |
| Teaching Level | | |
| Elementary | 13.6 | 10.1 |
| Secondary | 14.3 | 11.0 |

* The sample size for public teachers is 7,500 for analyses involving school size. The estimates involve adjusted weights.

** Significance tests for all two-way comparisons are provided in tables A-D in the appendix.

SOURCE: Public School Survey 1984-85 and Survey of Private Schools 1985-86.

geographic regions, at both teaching levels, and for small and mid-sized, but not large, schools.[6]

**Recent Participation in Training**

Public school teachers are generally more likely than their private school peers to report participating in training related to elementary or secondary education during the previous year. Table 11 indicates that about 61 percent of public school teachers participated in training compared to 54 percent of private school teachers. In addition to the difference in the overall rates of participation, there are differences in the types of training reported by the two groups of teachers. Public school teachers

TABLE 11: Percentages of Public and Private School Teachers Participating in Education-related Training, by Types of Training During the Previous Year

| Types of Training | Public Teachers (n=8,392) | Private Teachers (n=5,249) |
|---|---|---|
| College Credit Only | 17 * | 20 |
| Inservice Only | 21 | 14 |
| Other Training Only | 4 | 6 |
| Combination of Types | 20 | 13 |
| No Training | 39** | 46 |

* Significance tests for all two-way comparisons are provided in tables A-D in the appendix.

** Columns may not add to 100 percent due to rounding.

SOURCE: Public School Survey 1984-85 and Survey of Private Schools 1985-86.

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[6]Private school teachers are more likely than their public school counterparts to be teaching part time and to have previous part-time teaching experience. Sixteen percent of the private school teachers and less than 4 percent of public school teachers reported themselves to be in something other than "a full-time position at the school with teaching as primary assignment" at the time of the survey. Thirty-eight percent of private school teachers, it should be noted, report that some of their teaching experience was in public schools, and about two-thirds of that public school experience was full time. (Comparable data for current public school teachers are not available.)

are more likely to report inservice training or training involving a combination of types, while private school teachers are more likely to report college credit courses or "other" training.[7]

### Teaching Experience and Recent Training

Public school teachers report lower rates of participation in training as their years of experience mount up (table 12). For private school teachers, no consistent trend is apparent.

TABLE 12: Percentages of Public and Private School Teachers Participating in Training, by Years of Full-time Teaching Experience Categories

| | Years of Full-time Teaching Experience | | | | | |
|---|---|---|---|---|---|---|
| | Fewer Than 5 | 5-9 | 10-14 | 15-19 | 20-24 | More Than 25 |
| Private Teachers (n=5,249) | 51 * | 56 | 55 | 52 | 54 | 50 |
| Public Teachers (n=8,392) | 68 | 66 | 63 | 59 | 55 | 50 |

* Significance tests for all two-way comparisons are provided in tables A-D in the appendix.

SOURCE: Public School Survey 1984-85 and Survey of Private Schools 1985-86.

## DISCRIMINATING BETWEEN PUBLIC AND PRIVATE SCHOOL TEACHERS

The previous section presented differences and similarities between public and private school teachers based on a variety of contextual, background, and demographic variables considered one at a time. In this section, the differences between the two groups are presented in terms of combinations of variables as well

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[7]That public school teachers are more likely to report inservice or a combination of training may be simply because greater opportunities are provided for inservice training by a local education agency, an organizational structure without parallel for many private schools.

as each variable's unique contribution to understanding the characteristics of public and private school teachers.

Whether a teacher works in a public or private school has been shown to be related to a variety of background and experience characteristics of the teachers. However, many of the variables that distinguish public and private school teachers are correlated. Table 13 indicates significantly high correlations for public and private school teachers between school size and teaching level; gender and teaching level; highest degree and full-time experience; and others.

TABLE 13: Correlations among Variables That Distinguish between Public and Private School Teachers

| | School Size | Teaching Level | Highest Degree | Full-time Experience | Race/ Ethnic | Gender |
|---|---|---|---|---|---|---|
| Age | .08 | .02 | .21 | .77 | -.00 | -.01 |
| Gender | -.19 | -.40 | -.14 | -.10 | -.04 | |
| Race/ Ethnic | -.06 | -.02 | -.00 | -.02 | | |
| Full-time Experience | .15 | .07 | .28 | | | |
| Highest Degree | .17 | .19 | | | | |
| Teaching Level | .43 | | | | | |

(n = 12,749-total public and private school teacher sample)*

* The sample size for public teachers is 7,500 for analyses involving school size. This reduces the overall sample (public plus private school teachers) from 13,641 to 12,749. The estimates involve adjusted weights.

SOURCE: Public School Survey 1984-85 and Survey of Private Schools 1985-86.

Given these correlations, a basic question is upon which of the background and experience variables included in the previous tabulations do public and private school teachers differ. The results of a discriminant analysis indicate that public and private school teachers differ, in the directions highlighted in the previous sections of this report, with respect to a number of variables including size of the schools in which they teach, an undergraduate education major or a dual major involving education, living in the Northeast, highest degree, years of full-time teaching experience, and gender (table 14). In large measure, the statistical significance of these relationships is a function of the large sample size; thus, the size of the relationship, as well as their significance, should be kept in mind. At the same time, the variables listed in the table account for 28 percent of the variance, which indicates that the variables are important as a group.

TABLE 14: Variables That Discriminate between Public and Private School Teachers*

| Characteristic | Partial $R^2$ |
|---|---|
| School Size | .073 |
| Education Major | .072 |
| Dual Major | .039 |
| Northeast Region | .015 |
| Highest Academic Degree | .010 |
| Full-time Experience | .010 |
| Gender | .010 |
| Midwest Region | .010 |
| West Region | .008 |
| Recent Training | .006 |
| South Region | .005 |
| Race/Ethnicity | .004 |
| Teaching Level | .002 |

(n = 12,749-total public and private sample)**

* Statistical significance was tested with Wilks' Lambda against the probability of F.

** The sample size for public teachers is 7,500 for analyses involving school size. This reduces the overall sample (public plus private school teachers) from 13,641 to 12,749. The estimates involve adjusted weights.

SOURCE: Public School Survey 1984-85 and Survey of Private Schools 1985-86.

The partial $R^2$ column in the table indicates the extent to which the particular variable distinguishes between the two groups while controlling for the effects of the other variables. Even the variables that appear from their small partial $R^2$ values to have virtually no independent ability to discriminate between the two groups are, in fact, statistically significant discriminators. These results indicate that public and private school teachers differ significantly on each of the background and experience variables included in the analysis despite their correlations.

## POSSIBLE EXTENSIONS OF THE ANALYSIS

Two topics related to differences between public and private school teachers seem particularly worthy of note. First, there appears to be more diversity within the group of private school teachers than among their public school counterparts; typical evidence of this would be that private school teachers are more likely to have noneducation majors than public school teachers.

Second, about one in six of private school teachers (almost 65,000 teachers across the United States) is part time. This compares with less than 4 percent (but over 80,000) of the public school teachers. Differences between full-time and part-time teachers should be explored further, perhaps in combination with studies comparing the organization of public and private schools.

## SUMMARY

The survey results presented provide detailed comparisons of public and private school teachers. Most of the analyses focus on the extent that public and private school teachers differ on demographic characteristics, educational background, and teaching experience and the extent to which those differences persist when region, school size, and teaching level are also considered.

The analyses indicate that differences between public and private school teachers vary from small matters differences (for example, a 6 percent difference between the white percentages of each group) and what appear to be substantial differences (for example, a 17 percent difference between the percentages of each group with a master's degree or higher). As examples of the differences and similarities between the two groups of teachers:

- Eight percent of private school teachers and 14 percent of public school teachers are members of minority groups;

- Women, at 76 percent for private school teachers and 68 percent for public school teachers, provide the great majority of both teaching groups;

- Public school teachers are more likely than private school teachers to have earned an advanced academic (master's or doctorate) degree (48 percent to 31 percent); and

- As undergraduates, private school teachers are more likely than public school teachers to have majored in fields other than education (46 percent to 28 percent).

In addition, when public and private school teachers are compared in a discriminant analysis across a variety of background and experience characteristics considered together, significant differences between the two groups can still be observed. In particular, despite significant correlations among many of the background and experience characteristics, public and private school teachers differ with respect to school size, undergraduate education major or dual major involving education, residence in the Northeast, highest degree, years of full-time teaching experience, and gender.

## TECHNICAL NOTES

### The Surveys

The Public School Survey of 1984-85 had responses from 8,568 teachers and 2,301 administrators from an initial sample of 2,801 schools. Actual response rates were 85 percent for schools and 80 percent for teachers. The schools were selected from the Common Core of Data maintained by the National Center for Education Statistics and were stratified on school type (elementary, secondary, and other) and on local education agency size (1 to 5 schools, 5 to 50 schools, and more than 50 schools). Teachers were sampled from lists provided by the schools, stratified by "teaching assignment" (elementary, mathematics or science, and other). School-level data were collected on enrollment, student characteristics, staffing levels, use of aides and unpaid volunteers, computer usage, incentive pay programs, and other areas. Teacher-level data were collected on demographic characteristics, educational background, training experiences, time usage, use of aides and unpaid volunteers, compensation, and other employment as well as other topics. Data collection occurred within the first few months of 1985.

The 1985-86 National Survey of Private Schools had responses from 5,295 teachers and 1,175 administrators from 1,387 private schools during spring 1986. The overall response rate was 85 percent for schools and 76 percent for teachers. The schools were selected from lists developed in 1983 of all identifiable private schools in 75 primary sampling units. Teachers were selected without stratification from lists supplied by the schools. At the school level, data were collected about religious orientation, grades served, enrollment and student characteristics, tuition, staffing, use of aides and volunteers, program offerings, and years of operation. From teachers, information was obtained about demographic and educational characteristics, courses taught, time expenditures, cash and noncash compensation, use of teacher aides and unpaid volunteers, and other employment.

### Item Descriptions and Variable Definitions

School Size: the number of students at a school based on item 1 on the Public School Administrator questionnaire, "How many students were on the official membership roll of this school on or about October 1, 1984?" and on the sum of the entries to item 4 on the Private School Administrator questionnaire, "[...] enter the actual number of students enrolled in that grade."

Schools were categorized as small with less than 400, mid-sized with 400-699, and large with 700 or more students.

Region: the part of the country where the school is located. Private school data were recoded based on their FIPS code numbers to correspond to the Census Bureau's geographic regions and, consequently, to the public school regions.

Teaching Level: the grades taught at the school based on Public Administrator questionnaire item 9 and Private Administrator item 4, "Check each grade in which instruction is offered in this school, whether or not there are any students enrolled in that grade."

The schools' teaching levels were coded as "elementary" if the highest grade in the school was less than grade nine; "secondary" if the lowest grade was higher than grade eight; or "other." If a teacher was linked to a school with teaching levels defined as "elementary" or "secondary," the teacher was likewise defined as teaching at the "elementary level" or "secondary level."

This approach defined the teaching level of 7,076, or 94.2 percent, of the sample of 7,500 public school teachers who could be linked to school-level data and 4,196, or 79.2 percent, of the total sample of 5,295 private school teachers. For some analyses, the sample size is less than 7,500 because of missing values for some of the sampled teachers.

The teaching level of teachers whose school's teaching level was defined as "other" or who could not be linked to a school was based on Public Teacher questionnaire item 14 and Private Teacher questionnaire items 11 and 12, which asked for the grade levels of the students taught. If the highest grade of the students taught was less than grade nine and the lowest grade was kindergarten or higher, teaching level was defined as "elementary"; if the lowest grade was at or above grade nine, teaching level was "secondary." Teachers of prekindergarten or ungraded classes, where no grade level boundaries could be established by inspecting the data, were defined as "missing" for this analysis. As a result of both steps, 8,392 of the total public school sample of 8,568 were defined as "elementary" or "secondary" level teachers as were 5,249 of 5,295 private school teachers.

Age: based on Public Teacher item 35 and Private Teacher item 25, "What was your age on your last birthday?"

Gender: based on Public Teacher item 34 and Private Teacher item 24, "What is your sex?"

Race/Ethnicity: self-reported racial/ethnic information based on Public Teacher item 33 and Private Teacher item 23.

To which one of the following racial/ethnic groups do you belong? (Check one)

American Indian or Alaskan Native

Asian or Pacific Islander
Black (not of Hispanic origin)
White (not of Hispanic origin)
Hispanic

All but "White (not of Hispanic origin)" were grouped as "minority" because of the small numbers of responses to several of the categories, particularly from the private teacher group.

Highest Degree: highest academic degree based on Public Teacher item 1 and Private Teacher item 1.

Check the box below for the HIGHEST academic degree you have earned. (Do not include honorary degrees.)

No Degree
Associate
Bachelor's
Master's
Doctorate

No Degree and Associate were grouped as "Less than Bachelor's," and Master's and Doctorate were grouped as "Master's or Higher" for this survey report.

Undergraduate Major: major field of study based on Public Teacher item 2 and Private Teacher item 2, "What was (were) your major field(s) of study for your BACHELOR'S DEGREE(s)? (If you had more than one major, specify all that apply.)"

Responses were grouped as "Education" or "Noneducation," and teachers were coded as having an education major, a noneducation major, or both.

Teaching Experience: the number of years of teaching experience based on Public Teacher item 8 and Private Teacher item 8, "How many years of elementary/secondary school teaching experience in public and private schools will you have completed by the end of this school year?"

Both surveys provided full-time and part-time years separately, but only the private school survey provided public and private school experience separately. Only the full-time years were used in this survey report.

Recent Training: education of teachers during the past year based on Public Teacher item 4, "During the 1984 calendar year (January 1, 1984-December 31, 1984), did you take any courses or other training related to elementary and/or secondary education?" and Private Teacher item 4, "During the 1984-85 school year (September 1984-August 1985), did you take any courses or other training related to elementary and/or secondary education?"

Training Type: kind of education of teachers during the past year based on Public Teacher item 5 and Private Teacher item 5. [If "yes" to item 4] What kind of training was this? (Check all that apply)

College Credit Courses
In-service Training
Other.

If more than one kind of training was indicated, the teacher's training was coded as "Combination."

Full-time/Part-time Position: employment status based on Public Teacher item 13, "How would you classify your position AT THIS SCHOOL?" and Private Teacher item 10, "How would you classify your teaching assignment while employed at this school during the 1985-86 school year?"

For both items, the choices were "full-time, 3/4 time, 1/2 time, 1/4 time, other." For these analyses, part-time teachers were included, but their sample weights (used to generate population estimates) were multiplied by their response to these items; for example, a 1/4 time teacher's weight would be multiplied by .25. ("Other" responses were counted as 1/2 time responses.)

**Precision of Estimates**

The estimates presented in the tables are based on samples and are subject to sampling variability. Caution should be exercised in interpreting statistics based on relatively small numbers of cases as well as in interpreting relatively small differences among estimates. If the questionnaires had been sent to different samples, the responses would not have been identical; some numbers might have been higher, others lower. The standard errors in tables A-D in the appendix provide indications of the accuracy of each estimate. If all possible samples of the same size were surveyed under similar conditions, a range of plus or minus two standard errors would include the population value in about 95 percent of the time.

Because the public and private samples were drawn separately, at different times, using different procedures, and from different populations, standard errors were computed separately for public and private teacher estimates. As a result, additional steps were needed to compare the two sets of estimates. The estimated difference between the separate estimates merely involved subtracting the private estimate from the public one; the estimated difference was then converted to a standardized form by

dividing the estimated difference by its standard deviation to obtain a z statistic.[8] This can be written as follows:

Estimated difference $\hat{d}_i = \hat{x}_i - \hat{y}_i$

where $\hat{x}_i$ = public teacher estimate for cell i, and

$\hat{y}_i$ = private teacher estimate for cell i.

Standardized difference $z_i = \frac{\hat{d}_i}{s(\hat{d}_i)}$

where $s(\hat{d}_i) = [var(\hat{x}_i)+var(\hat{y}_i)]^{1/2}$

The z statistic can be used to judge significance; if the absolute value of z is greater than 2, significance is at the 95 percent level, and a z greater than 3 is significant at the 99 percent level. This survey report involves numerous comparisons, which makes it particularly important to use caution in interpreting small differences. A z of three or higher has been used here as the minimum, accepted level of significance.

Standard errors cannot take the effects of nonsampling biases into account. Several nonsampling factors potentially bias or limit the findings presented here. First, the newest of the data are from the 1985-86 school year (Private School Survey). The Survey of Public Schools data are from 1984-85. While substantial changes during the past 2 or 3 years are unlikely for the variables analyzed here, such changes cannot be ruled out completely. Second, the surveys were not designed with the specific types of analyses presented here in mind; consequently, some desirable information (for example, reasons for entering the teaching profession and plans to continue teaching) was not requested. Third, some sample bias is probably unavoidable, particularly for private schools for which universe data bases do not exist; this is complicated by the fact that the two surveys used different sampling strategies, which makes it difficult to determine standard errors of estimates using a merged data set. Fourth, nonsample biases cannot be discounted either; errors in interpreting items by respondents, coding and entering responses, and nonresponse biases are all possible. When identified, a few cases of obvious coding errors have been repaired or defined as missing. Nothing, of course, can repair errors in misinterpretation by respondents, but the items addressed here

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[8]This method follows that used by J. Michael Brick of Westat, Inc., in earlier public/private estimate comparisons conducted for the Center for Education Statistics.

appear straightforward enough to keep this potential problem to a minimum.

**Discriminant Analysis**

The SAS discriminant procedure was conducted on a merged public and private school teacher sample of 12,749 cases; each case had to be linked to school-level data and had to include an elementary or secondary teaching level code. All categorical variables (for example, specific regions) were treated as "dummy" variables, that is they were recoded as either zero or one.

The discriminant was performed twice, first with all independent variables included and second using stepwise procedures. A chi-square test of the homogeneity of within covariance matrices found the within covariance matrices not to be significantly different; thus, the pooled covariance was used. The only independent variables not significant (at $p > .01$) through the stepwise discriminant were age (at $p = .03$) and having noneducation undergraduate major (at $p = .26$); all others were included and were significant based on Wilk's Lambda test. The squared canonical correlation at the final step was .28.

**For More Information**

For more information about this survey report or the National Center for Education Statistics' 1984-85 Public School Survey or 1985-86 National Survey of Private Schools, contact Charles H. Hammer, Elementary and Secondary Education Division, National Center for Education Statistics, U.S. Department of Education, 555 New Jersey Avenue, NW, Washington, DC 20208; telephone (202) 357-6330.

## APPENDIX

TABLE A: Population Estimates and Percentages of Selected Characteristics of Teachers by Public and Private School Control: 1984-1986

TABLE B: (1) Percentages of Selected Teacher Characteristics by Public and Private School Control and Northeast and Midwest Regions: 1984-1986

(2) Percentages of Selected Teacher Characteristics by Public and Private School Control and West and South Regions: 1984-1986

TABLE C: Percentages of Selected Teacher Characteristics by Public and Private School Control and School Size: 1984-1986

TABLE D: Percentages of Selected Teacher Characteristics by Public and Private School Control and Elementary and Secondary School Teaching Levels: 1984-1986

TABLE A: Population Estimates and Percentages of Selected Characteristics of Teachers by Public and Private School Control: 1984-1986

| Characteristics | Public (N=8,392) | | | Private (N=5,249) | | | Public/Private | |
|---|---|---|---|---|---|---|---|---|
| | Population Estimate | Estimated Percentage | Standard Error | Population Estimate | Estimated Percentage | Standard Error | Percentage Difference | Z |
| **All Teachers** | 2,055,839 | 100.0 | NA | 398,419 | 100.0 | NA | NA | NA |
| **Highest Degree** | | | | | | | | |
| Less than Bachelor's | 18,503 | 0.9 | 0.1 | 20,319 | 5.1 | 0.5 | -4.2 | -8.2 |
| Bachelor's | 1,054,645 | 51.3 | 0.8 | 254,988 | 64.0 | 1.1 | -12.7 | -9.3 |
| Master's or Higher | 982,691 | 47.8 | 0.8 | 123,111 | 30.9 | 1.1 | 16.9 | 12.4 |
| **Academic Major** | | | | | | | | |
| Education | 1,476,092 | 71.8 | 0.7 | 212,756 | 53.4 | 1.3 | 18.4 | 12.5 |
| Noneducation | 219,975 | 10.7 | 0.4 | 136,259 | 34.2 | 1.3 | -23.5 | -17.3 |
| Both | 359,772 | 17.5 | 0.5 | 48,209 | 12.1 | 0.6 | 5.4 | 6.9 |
| **Recent Training** | | | | | | | | |
| College Credit Only | 347,437 | 16.9 | 0.8 | 80,481 | 20.2 | 1.2 | -3.3 | -2.3 |
| Inservice Only | 425,559 | 20.7 | 0.9 | 56,974 | 14.3 | 1.1 | 6.4 | 4.5 |
| Other Only | 74,010 | 3.6 | 0.3 | 23,905 | 6.0 | 1.0 | -2.4 | -2.3 |
| Combination | 407,056 | 19.8 | 0.9 | 53,388 | 13.4 | 1.1 | 6.4 | 4.5 |
| None Recently | 797,666 | 38.8 | 0.7 | 183,671 | 46.1 | 1.0 | -7.3 | -6.0 |
| **Race/Ethnicity** | | | | | | | | |
| Minority | 1,778,301 | 13.3 | 0.5 | 367,741 | 7.7 | 0.7 | 5.6 | 6.5 |
| White | 277,538 | 86.7 | 0.6 | 30,678 | 92.3 | 0.7 | -5.6 | -6.1 |
| **Gender** | | | | | | | | |
| Female | 1,395,915 | 67.9 | 0.7 | 301,603 | 75.7 | 1.2 | -7.8 | -5.6 |
| Male | 659,924 | 32.1 | 0.7 | 96,816 | 24.3 | 1.2 | 7.8 | 5.6 |
| **Age** | | | | | | | | |
| Younger than 30 Years | 281,650 | 13.7 | 0.5 | 94,824 | 23.8 | 1.0 | -10.1 | -9.0 |
| 30 - 34 | 351,548 | 17.1 | 0.5 | 71,715 | 18.0 | 0.7 | -0.9 | -1.0 |
| 35 - 39 | 470,787 | 22.9 | 0.6 | 78,887 | 19.8 | 0.7 | 3.1 | 3.4 |
| 40 - 44 | 328,934 | 16.0 | 0.5 | 55,380 | 13.9 | 0.6 | 2.1 | 2.7 |
| 45 - 49 | 236,421 | 11.5 | 0.4 | 36,655 | 9.2 | 0.5 | 2.3 | 3.6 |
| 50 or Older | 338,554 | 18.9 | 0.6 | 60,560 | 15.2 | 0.6 | 3.7 | 4.4 |
| **Full-time Teaching Experience** | | | | | | | | |
| Less than 5 Years | 246,701 | 12.0 | 0.5 | 123,908 | 31.1 | 1.0 | -19.1 | -17.1 |
| 5 - 9 | 425,559 | 20.7 | 0.6 | 103,987 | 26.1 | 0.9 | -5.4 | -5.0 |
| 10 - 14 | 499,569 | 24.3 | 0.6 | 74,504 | 18.7 | 0.7 | 5.6 | 6.1 |
| 15 - 19 | 402,944 | 19.6 | 0.6 | 41,037 | 10.3 | 0.5 | 9.3 | 11.9 |
| 20 - 24 | 230,254 | 11.2 | 0.4 | 22,710 | 5.7 | 0.4 | 5.5 | 9.7 |
| 25 or More | 250,812 | 12.2 | 0.5 | 32,272 | 8.1 | 0.5 | 4.1 | 5.8 |

TABLE B (1): Percentages of Selected Characteristics of Teachers by Public and Private School Control and Northeast and Midwest Regions: 1984-1986

| Characteristics | Northeast | | | | | | Midwest | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Public (N=1412) | | Private (N=1570) | | Public/Private | | Public (N=2051) | | Private (N=1411) | | Public/Private | |
| | Estimated Percentage | Standard Error | Estimated Percentage | Standard Error | Percentage Difference | Z | Estimated Percentage | Standard Error | Estimated Percentage | Standard Error | Percentage Difference | Z |
| **Highest Degree** | | | | | | | | | | | | |
| Less than Bachelor's | 0.8 | 0.3 | 4.9 | 0.7 | -4.1 | -5.4 | 0.4 | 0.1 | 2.0 | 0.4 | -1.6 | -3.9 |
| Bachelor's | 41.0 | 1.8 | 56.9 | 2.0 | -15.9 | -5.9 | 47.7 | 1.5 | 74.5 | 1.8 | -26.8 | -11.4 |
| Master's or Higher | 58.2 | 1.8 | 38.2 | 2.1 | 20.0 | 7.2 | 51.9 | 1.5 | 23.5 | 1.8 | 28.4 | 12.1 |
| **Academic Major** | | | | | | | | | | | | |
| Education | 66.3 | 1.5 | 48.5 | 2.3 | 17.8 | 6.5 | 76.8 | 1.3 | 63.9 | 2.3 | 12.9 | 4.9 |
| Noneducation | 13.1 | 1.1 | 39.7 | 2.4 | -26.6 | -10.1 | 7.6 | 0.7 | 24.3 | 1.8 | -16.7 | -8.6 |
| Both | 20.6 | 1.3 | 11.8 | 1.3 | 8.8 | 4.8 | 15.5 | 1.1 | 11.8 | 1.3 | 3.7 | 2.2 |
| **Recent Training** | | | | | | | | | | | | |
| College Credit Only | 15.5 | 2.2 | 18.0 | 2.3 | -2.5 | -0.8 | 17.6 | 1.8 | 19.6 | 2.5 | -2.0 | -0.6 |
| Inservice Only | 19.4 | 2.2 | 14.3 | 2.1 | 5.1 | 1.7 | 16.2 | 1.7 | 17.4 | 2.0 | -1.2 | -0.5 |
| Other Only | 5.2 | 1.4 | 7.1 | 1.8 | -1.9 | -0.8 | 3.9 | 1.0 | 3.9 | 1.0 | 0.0 | 0.0 |
| Combination | 12.9 | 2.0 | 10.8 | 1.6 | 2.1 | 0.8 | 18.3 | 1.8 | 16.1 | 1.9 | 2.2 | 0.8 |
| None Recently | 46.5 | 1.8 | 49.7 | 1.6 | -3.2 | -1.3 | 44.4 | 1.5 | 43.0 | 1.7 | 1.4 | 0.6 |
| **Race/Ethnicity** | | | | | | | | | | | | |
| Minority | 6.6 | 0.9 | 5.6 | 1.5 | 1.0 | 0.6 | 8.6 | 1.0 | 3.9 | 0.8 | 4.7 | 3.7 |
| White | 93.4 | 0.9 | 94.4 | 1.5 | -1.0 | -0.6 | 91.4 | 1.0 | 96.1 | 0.8 | -4.7 | -3.7 |
| **Gender** | | | | | | | | | | | | |
| Female | 60.5 | 1.7 | 73.8 | 2.1 | -13.3 | -4.9 | 63.8 | 1.5 | 77.4 | 2.1 | -13.6 | -5.3 |
| Male | 39.5 | 1.7 | 26.2 | 2.1 | 13.3 | 4.9 | 36.2 | 1.5 | 22.6 | 2.1 | 13.6 | 5.3 |
| **Age** | | | | | | | | | | | | |
| Younger than 30 Years | 10.9 | 1.2 | 22.5 | 1.4 | -11.6 | -6.3 | 13 | 1.1 | 25.0 | 2.1 | -12.0 | -5.1 |
| 30 - 34 | 11.5 | 1.1 | 17.9 | 1.3 | -6.4 | -3.8 | 17.1 | 1.1 | 18.4 | 1.2 | -1.3 | -0.8 |
| 35 - 39 | 27.0 | 1.5 | 18.7 | 1.5 | 8.3 | 3.9 | 23.1 | 1.2 | 20.6 | 1.3 | 2.5 | 1.4 |
| 40 - 44 | 18.3 | 1.4 | 14.1 | 0.9 | 4.2 | 2.5 | 16.8 | 1.1 | 12.9 | 1.1 | 3.9 | 2.5 |
| 45 - 49 | 12.7 | 1.1 | 10.8 | 1.1 | 1.9 | 1.2 | 11.4 | 0.9 | 8.6 | 0.9 | 2.8 | 2.2 |
| 50 or Older | 19.7 | 1.4 | 16.0 | 1.2 | 3.7 | 2.0 | 18.6 | 1.1 | 14.5 | 1.1 | 4.1 | 2.6 |
| **Full-time Teaching Experience** | | | | | | | | | | | | |
| Less than 5 Years | 7.1 | 0.9 | 27.7 | 1.9 | -20.6 | -9.8 | 10.8 | 1.0 | 30.4 | 1.9 | -19.6 | -9.1 |
| 5 - 9 | 16.0 | 1.3 | 25.2 | 1.9 | -9.2 | -4.0 | 18.3 | 1.1 | 24.8 | 1.2 | -6.5 | -4.0 |
| 10 - 14 | 25.0 | 1.5 | 17.2 | 1.2 | 7.8 | 4.1 | 25.0 | 1.3 | 19.7 | 1.2 | 5.3 | 3.0 |
| 15 - 19 | 25.1 | 1.3 | 12.7 | 1.1 | 12.4 | 7.3 | 21.4 | 1.2 | 9.7 | 0.9 | 11.7 | 7.8 |
| 20 - 24 | 14.1 | 1.1 | 6.6 | 0.7 | 7.5 | 5.8 | 10.9 | 0.8 | 6.6 | 0.9 | 4.3 | 3.6 |
| 25 or More Years | 12.7 | 1.1 | 10.6 | 1.2 | 2.1 | 1.3 | 13.5 | 0.9 | 8.8 | 0.9 | 4.7 | 3.7 |

TABLE B (2): Percentages of Selected Characteristics of Teachers by Public and Private School Control and West and South Regions: 1984-1986

| Characteristics | West | | | | | | South | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Public (N=1664) | | Private (N=956) | | Public/Private | | Public (N=3265) | | Private (N=1312) | | Public/Private | |
| | Estimated Percentage | Standard Error | Estimated Percentage | Standard Error | Percentage Difference | Z | Estimated Percentage | Standard Error | Estimated Percentage | Standard Error | Percentage Difference | Z |
| **Highest Degree** | | | | | | | | | | | | |
| Less than Bachelor's | 0.3 | 0.1 | 6.0 | 1.0 | -5.7 | -5.7 | 1.6 | 0.3 | 7.4 | 1.3 | -5.8 | -4.3 |
| Bachelor's | 62.3 | 1.6 | 64.7 | 2.7 | -2.4 | -0.8 | 53.5 | 1.2 | 61.8 | 2.0 | -8.3 | -3.6 |
| Master's or Higher | 37.4 | 1.6 | 29.3 | 2.6 | 8.1 | 2.7 | 44.9 | 1.2 | 30.7 | 2.2 | 14.2 | 5.7 |
| **Academic Major** | | | | | | | | | | | | |
| Education | 63.0 | 1.6 | 45.2 | 3.5 | 17.8 | 4.6 | 76.0 | 1.0 | 54.7 | 2.4 | 21.3 | 8.2 |
| Noneducation | 14.4 | 1.1 | 42.5 | 3.1 | -28.1 | -8.5 | 9.5 | 0.7 | 32.6 | 2.8 | -23.1 | -8.0 |
| Both | 22.6 | 1.2 | 12.3 | 1.5 | 10.3 | 5.4 | 14.4 | 0.9 | 12.7 | 1.0 | 1.7 | 1.3 |
| **Recent Training** | | | | | | | | | | | | |
| College Credit Only | 19.0 | 1.7 | 21.5 | 2.6 | -2.5 | -0.8 | 16.2 | 1.3 | 22.2 | 2.5 | -6.0 | -2.1 |
| Inservice Only | 17.8 | 1.7 | 14.5 | 2.3 | 3.3 | 1.2 | 26.1 | 1.6 | 11.5 | 2.3 | 14.6 | 5.2 |
| Other Only | 2.7 | 0.8 | 6.0 | 2.4 | -3.3 | -1.3 | 31.8 | 0.6 | 6.5 | 2.2 | 25.3 | 11.1 |
| Combination | 29.4 | 1.9 | 19.8 | 2.7 | 9.6 | 2.9 | 19.5 | 1.4 | 10.3 | 2.2 | 9.2 | 3.5 |
| None Recently | 31.0 | 1.5 | 38.2 | 2.4 | -7.2 | -2.5 | 35.1 | 1.1 | 49.5 | 2.1 | -14.4 | -6.1 |
| **Race/Ethnicity** | | | | | | | | | | | | |
| Minority | 12.2 | 1.1 | 11.7 | 0.8 | 0.5 | 0.4 | 21.2 | 1.1 | 10.8 | 1.4 | 10.4 | 5.8 |
| White | 87.8 | 1.1 | 88.3 | 1.8 | -0.5 | -0.2 | 78.8 | 1.1 | 89.2 | 1.4 | -10.4 | -5.8 |
| **Gender** | | | | | | | | | | | | |
| Female | 64.8 | 1.6 | 71.4 | 3.1 | -6.6 | -1.9 | 76.4 | 1.0 | 78.6 | 2.2 | -2.2 | -0.9 |
| Male | 35.2 | 1.6 | 28.6 | 3.1 | 6.6 | 1.9 | 23.6 | 1.0 | 21.4 | 2.2 | 2.2 | 0.9 |
| **Age** | | | | | | | | | | | | |
| Younger than 30 Years | 13.4 | 1.1 | 23.5 | 2.2 | -10.1 | -4.1 | 15.8 | 0.9 | 24.4 | 2.0 | -8.6 | -3.9 |
| 30 - 34 | 16.4 | 1.1 | 21.9 | 2.5 | -5.5 | -2.0 | 20.5 | 1.0 | 15.7 | 1.2 | 4.8 | 3.1 |
| 35 - 39 | 19.4 | 1.4 | 17.7 | 1.4 | 1.7 | 0.9 | 22.3 | 0.9 | 21.5 | 1.5 | 0.8 | 0.5 |
| 40 - 44 | 14.7 | 1.1 | 12.7 | 1.3 | 2.0 | 1.2 | 14.9 | 0.8 | 15.4 | 1.2 | -0.5 | -0.3 |
| 45 - 49 | 12.3 | 1.0 | 9.0 | 1.2 | 3.3 | 2.1 | 10.4 | 0.7 | 8.2 | 0.9 | 2.2 | 1.9 |
| 50 or Older | 23.7 | 1.4 | 15.4 | 1.5 | 8.3 | 4.0 | 16.1 | 0.8 | 14.9 | 1.3 | 1.2 | 0.8 |
| **Full-/time Teaching Experience** | | | | | | | | | | | | |
| Less than 5 Years | 15.2 | 1.1 | 35.1 | 2.9 | -19.9 | -6.4 | 13.7 | 0.8 | 32.7 | 2.0 | -19.0 | -8.8 |
| 5 - 9 | 20.3 | 1.4 | 27.3 | 1.9 | -7.0 | -3.0 | 25.1 | 1.0 | 27.4 | 1.8 | -2.3 | -1.1 |
| 10 - 14 | 22.1 | 1.3 | 15.9 | 1.7 | 6.2 | 2.9 | 24.5 | 1.0 | 20.9 | 1.5 | 3.6 | 2.0 |
| 15 - 19 | 15.9 | 1.1 | 9.2 | 1.2 | 6.7 | 4.1 | 17.4 | 0.9 | 9.1 | 1.0 | 8.3 | 6.2 |
| 20 - 24 | 10.7 | 0.9 | 4.9 | 1.0 | 5.8 | 4.3 | 10.2 | 0.7 | 4.5 | 0.8 | 5.7 | 5.4 |
| 25 or More Years | 15.7 | 1.2 | 7.6 | 1.2 | 8.1 | 4.8 | 9.2 | 0.6 | 5.3 | 0.7 | 3.9 | 4.2 |

TABLE C: Percentages of Selected Teacher Characteristics by Public and Private School Control and School Size: 1984-1986

| Characteristics | Small | | | | | | Mid-sized | | | | | | Large | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Public (N=2049) | | Private (N=3324) | | Public/Private | | Public (N=2143) | | Private (N=1134) | | Public/Private | | Public (N=3304) | | Private (N=791) | | Public/Private | |
| | Estimated Percentage | Standard Error | Estimated Percentage | Standard Error | Percentage Difference | t | Estimated Percentage | Standard Error | Estimated Percentage | Standard Error | Percentage Difference | t | Estimated Percentage | Standard Error | Estimated Percentage | Standard Error | Percentage Difference | t |
| **Highest Degree** | | | | | | | | | | | | | | | | | | |
| Less than Bachelor's | 0.6 | 0.2 | 6.8 | 0.8 | -6.2 | -7.5 | 0.7 | 0.2 | 2.6 | 0.5 | -1.9 | -3.5 | 1.0 | 0.2 | 2.0 | 0.5 | -1.0 | -1.9 |
| Bachelor's | 60.7 | 1.5 | 68.1 | 1.3 | -7.4 | -3.7 | 53.7 | 1.3 | 62.7 | 2.1 | -9.0 | -3.6 | 49.2 | 1.4 | 50.7 | 2.6 | -1.5 | -0.5 |
| Master's or Higher | 38.7 | 1.5 | 25.0 | 1.3 | 13.7 | 6.9 | 45.6 | 1.3 | 34.7 | 2.1 | 10.9 | 4.4 | 49.7 | 1.4 | 47.2 | 2.8 | 2.5 | 0.8 |
| **Academic Major** | | | | | | | | | | | | | | | | | | |
| Education | 77.3 | 1.2 | 57.1 | 1.5 | 20.2 | 10.5 | 75.4 | 1.2 | 53.1 | 2.7 | 22.3 | 7.5 | 65.5 | 1.2 | 42.6 | 3.1 | 22.9 | 6.9 |
| Noneducation | 8.2 | 0.8 | 30.3 | 1.5 | -22.1 | -13.8 | 9.2 | 0.8 | 34.1 | 2.4 | -24.9 | -9.8 | 14.2 | 0.8 | 47.4 | 3.5 | -33.2 | -9.2 |
| Both | 14.5 | 1.0 | 12.5 | 0.9 | 2.0 | 1.5 | 15.4 | 0.9 | 12.8 | 1.2 | 2.6 | 1.7 | 20.3 | 1.0 | 10.0 | 1.2 | 10.3 | 6.6 |
| **Recent Training** | | | | | | | | | | | | | | | | | | |
| College Credit Only | 18.0 | 1.6 | 19.5 | 1.6 | -1.5 | -0.6 | 16.6 | 1.5 | 22.1 | 2.5 | -5.4 | -1.9 | 16.8 | 1.6 | 19.1 | 3.4 | -2.3 | -0.6 |
| Inservice Only | 20.4 | 1.7 | 13.4 | 1.4 | 7.0 | 3.2 | 21.8 | 1.6 | 17.8 | 2.2 | 4.0 | 1.5 | 19.5 | 1.7 | 11.7 | 3.2 | 7.8 | 2.2 |
| Other Only | 3.4 | 0.7 | 5.8 | 1.2 | -2.4 | -1.8 | 3.5 | 0.7 | 5.0 | 1.9 | -1.6 | -0.8 | 3.6 | 0.8 | 7.0 | 2.7 | -3.5 | -1.2 |
| Combination | 23.2 | 1.7 | 14.1 | 1.4 | 9.1 | 4.1 | 21.1 | 1.6 | 12.9 | 1.9 | 8.2 | 3.3 | 18.1 | 1.6 | 10.4 | 2.3 | 7.7 | 2.7 |
| None Recently | 35.5 | 1.4 | 46.1 | 1.2 | -10.6 | -5.7 | 36.9 | 1.4 | 41.9 | 2.3 | -5.0 | -1.9 | 42.3 | 1.2 | 51.2 | 2.4 | -8.9 | -3.3 |
| **Race/Ethnicity** | | | | | | | | | | | | | | | | | | |
| Minority | 8.7 | 0.9 | 9.0 | 1.0 | -0.3 | -0.2 | 13.9 | 1.0 | 6.3 | 1.1 | 7.6 | 5.1 | 14.2 | 0.9 | 4.9 | 1.2 | 9.3 | 6.2 |
| White | 91.3 | 0.9 | 91.0 | 1.0 | 0.3 | 0.2 | 86.1 | 1.0 | 93.7 | 1.1 | -7.6 | -5.1 | 85.8 | 0.9 | 95.1 | 1.2 | -9.3 | -6.2 |
| **Gender** | | | | | | | | | | | | | | | | | | |
| Female | 76.6 | 1.2 | 79.5 | 1.3 | -2.9 | -1.6 | 75.5 | 1.2 | 74.5 | 2.5 | 1.0 | 0.4 | 61.1 | 1.4 | 63.4 | 3.2 | -2.3 | -0.7 |
| Male | 23.4 | 1.2 | 20.5 | 1.3 | 2.9 | 1.6 | 24.5 | 1.2 | 25.5 | 2.5 | -1.0 | -0.4 | 38.9 | 1.4 | 36.6 | 3.2 | 2.3 | 0.7 |
| **Age** | | | | | | | | | | | | | | | | | | |
| Younger than 30 Years | 14.1 | 1.0 | 27.1 | 1.3 | -13.0 | -7.9 | 11.8 | 0.9 | 20.9 | 1.4 | -9.1 | -5.5 | 15.0 | 1.0 | 15.8 | 1.7 | -0.8 | -0.4 |
| 30 - 34 | 19.0 | 1.1 | 18.9 | 1.0 | 0.1 | 0.1 | 16.1 | 0.9 | 17.9 | 1.4 | -1.8 | -1.1 | 16.9 | 0.9 | 15.2 | 1.5 | 1.7 | 1.0 |
| 35 - 39 | 21.7 | 1.1 | 18.9 | 1.0 | 2.8 | 1.9 | 22.2 | 1.1 | 21.4 | 1.2 | 0.8 | 0.5 | 21.6 | 1.0 | 21.1 | 2.0 | 0.5 | 0.2 |
| 40 - 44 | 14.3 | 0.9 | 12.8 | 0.7 | 1.5 | 1.3 | 16.4 | 0.9 | 15.0 | 1.2 | 1.4 | 0.9 | 16.7 | 0.9 | 16.7 | 1.6 | 0.0 | 0.0 |
| 45 - 49 | 10.0 | 0.8 | 8.5 | 0.6 | 1.5 | 1.5 | 12.5 | 0.8 | 8.5 | 1.0 | 4.0 | 3.1 | 10.7 | 0.7 | 12.4 | 1.6 | -1.7 | -1.0 |
| 50 or Older | 20.9 | 1.1 | 13.8 | 0.7 | 7.1 | 5.6 | 21.1 | 1.0 | 16.3 | 1.3 | 4.8 | 2.9 | 19.2 | 1.0 | 18.7 | 1.8 | 0.5 | 0.2 |
| **Full-time Teaching Experience** | | | | | | | | | | | | | | | | | | |
| Less than 5 Years | 14.2 | 1.0 | 36.2 | 1.4 | -22.0 | -12.8 | 10.7 | 0.8 | 26.2 | 1.6 | -15.5 | -8.7 | 12.6 | 0.9 | 18.7 | 1.9 | -6.1 | -2.9 |
| 5 - 9 | 21.0 | 1.1 | 27.2 | 1.2 | -6.2 | -3.8 | 19.9 | 1.0 | 24.5 | 1.4 | -4.6 | -2.7 | 20.0 | 1.0 | 24.1 | 2.1 | -4.1 | -1.8 |
| 10 - 14 | 24.8 | 1.1 | 17.8 | 0.8 | 7.0 | 5.1 | 24.3 | 1.0 | 21.0 | 1.5 | 3.3 | 1.8 | 23.2 | 1.1 | 22.2 | 1.9 | 1.0 | 0.5 |
| 15 - 19 | 17.6 | 1.0 | 8.0 | 0.6 | 9.6 | 8.2 | 20.3 | 1.0 | 12.9 | 1.1 | 7.4 | 5.0 | 19.8 | 0.9 | 15.2 | 0.7 | 4.6 | 4.0 |
| 20 - 24 | 10.6 | 0.8 | 4.6 | 0.5 | 6.0 | 6.4 | 12.5 | 0.8 | 7.2 | 0.9 | 5.3 | 4.4 | 11.7 | 0.7 | 8.0 | 1.1 | 3.7 | 2.8 |
| 25 or More Years | 12.7 | 0.8 | 7.1 | 0.6 | 5.6 | 5.6 | 12.3 | 0.9 | 8.2 | 1.0 | 4.1 | 3.0 | 12.7 | 0.8 | 11.8 | 1.8 | 0.9 | 0.5 |

TABLE D: Percentages of Selected Teacher Characteristics by Public and Private School Control and Elementary and Secondary School Teaching Levels: 1984-1986

| | Elementary | | | | | | Secondary | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Public (N=3975) | | Private (N=3528) | | Public/Private | | Public (N=4417) | | Private (N=1721) | | Public/Private | |
| Characteristics | Estimated Percentage | Standard Error | Estimated Percentage | Standard Error | Percentage Difference | Z | Estimated Percentage | Standard Error | Estimated Percentage | Standard Error | Percentage Difference | Z |
| **Highest Degree** | | | | | | | | | | | | |
| Less than Bachelor's | 0.4 | 0.1 | 6.6 | 0.6 | -6.2 | -10.2 | 2.0 | 0.3 | 2.2 | 0.5 | -0.2 | -0.3 |
| Bachelor's | 54.6 | 1.0 | 71.7 | 1.1 | -17.1 | -11.5 | 44.8 | 1.0 | 49.4 | 1.8 | -4.6 | -2.2 |
| Master's or Higher | 45.0 | 1.0 | 21.7 | 1.1 | 23.3 | 15.7 | 53.2 | 1.0 | 48.4 | 1.8 | 4.8 | 2.3 |
| **Academic Major** | | | | | | | | | | | | |
| Education | 75.3 | 0.9 | 62.8 | 1.3 | 12.5 | 7.9 | 64.7 | 0.9 | 37.1 | 2.2 | 27.6 | 11.6 |
| Noneducation | 8.4 | 0.6 | 23.8 | 1.2 | -15.4 | -11.5 | 15.2 | 0.7 | 53.1 | 2.2 | -37.9 | -16.4 |
| Both | 16.2 | 0.7 | 13.4 | 0.7 | 2.8 | 2.8 | 20.0 | 0.7 | 9.9 | 0.9 | 10.1 | 8.9 |
| **Recent Training** | | | | | | | | | | | | |
| College Credit Only | 16.2 | 1.1 | 20.1 | 1.4 | -3.9 | -2.2 | 18.4 | 1.2 | 20.6 | 2.4 | -2.2 | -0.8 |
| Inservice Only | 22.3 | 1.2 | 17.1 | 1.3 | 5.2 | 2.9 | 17.9 | 1.2 | 8.9 | 2.0 | 9.0 | 3.9 |
| Other Only | 3.7 | 0.6 | 5.8 | 1.1 | -2.1 | -1.7 | 3.7 | 0.7 | 6.3 | 1.9 | -2.6 | -1.3 |
| Combination | 21.8 | 1.2 | 14.9 | 1.2 | 6.9 | 4.1 | 16.1 | 1.2 | 10.7 | 1.9 | 5.4 | 2.4 |
| None Recently | 36.2 | 1.0 | 42.2 | 1.1 | -6.0 | -4.0 | 44.0 | 1.0 | 53.5 | 1.8 | -9.5 | -4.6 |
| **Race/Ethnicity** | | | | | | | | | | | | |
| Minority | 15.1 | 0.7 | 8.8 | 1.0 | 6.3 | 5.2 | 10.4 | 0.6 | 5.7 | 0.8 | 4.7 | 4.7 |
| White | 84.9 | 0.7 | 91.2 | 1.0 | -6.3 | -5.2 | 89.6 | 0.6 | 94.3 | 0.8 | -4.7 | -4.7 |
| **Gender** | | | | | | | | | | | | |
| Female | 78.5 | 0.9 | 88.5 | 0.8 | -10.0 | -8.3 | 47.5 | 1.0 | 51.3 | 2.0 | -3.8 | -1.7 |
| Male | 21.5 | 0.9 | 11.5 | 0.8 | 10.0 | 8.3 | 52.5 | 1.0 | 48.7 | 2.0 | 3.8 | 1.7 |
| **Age** | | | | | | | | | | | | |
| Younger than 30 Years | 14.1 | 0.7 | 25.7 | 1.2 | -11.6 | -8.3 | 12.8 | 0.6 | 20.3 | 1.4 | -7.5 | -4.9 |
| 30 - 34 | 17.7 | 0.7 | 17.4 | 0.9 | 0.3 | 0.3 | 16.0 | 0.7 | 19.2 | 1.2 | -3.2 | -2.3 |
| 35 - 39 | 22.0 | 0.8 | 19.0 | 0.9 | 3.0 | 2.5 | 24.6 | 0.8 | 21.3 | 1.4 | 3.3 | 2.0 |
| 40 - 44 | 15.6 | 0.7 | 13.6 | 0.7 | 2.0 | 2.0 | 16.8 | 0.7 | 14.5 | 1.0 | 2.3 | 1.9 |
| 45 - 49 | 11.5 | 0.6 | 9.2 | 0.6 | 2.3 | 2.7 | 11.5 | 0.6 | 9.2 | 0.9 | 2.3 | 2.1 |
| 50 or Older | 19.1 | 0.7 | 15.1 | 0.7 | 4.0 | 4.0 | 18.4 | 0.8 | 15.4 | 1.2 | 3.0 | 2.1 |
| **Full-time Teaching Experience** | | | | | | | | | | | | |
| Less than 5 Years | 12.5 | 0.7 | 31.9 | 1.1 | -19.4 | -14.9 | 11.0 | 0.6 | 29.4 | 2.0 | -18.4 | -8.8 |
| 5 - 9 | 21.3 | 0.8 | 27.8 | 1.1 | -6.5 | -4.8 | 19.5 | 0.7 | 22.9 | 1.4 | -3.4 | -2.2 |
| 10 - 14 | 25.0 | 0.8 | 18.0 | 0.8 | 7.0 | 6.2 | 22.9 | 0.8 | 20.1 | 1.2 | 2.8 | 1.9 |
| 15 - 19 | 18.7 | 0.7 | 9.1 | 0.6 | 9.6 | 10.4 | 21.4 | 0.8 | 12.7 | 1.1 | 8.7 | 6.4 |
| 20 - 24 | 10.8 | 0.6 | 5.5 | 0.5 | 5.3 | 6.8 | 12.2 | 0.6 | 6.1 | 0.8 | 6.1 | 6.1 |
| 25 or More Years | 11.8 | 0.6 | 7.7 | 0.5 | 4.1 | 5.2 | 13.1 | 0.7 | 8.9 | 1.0 | 4.2 | 3.4 |

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